Claims

1.   Intelligent peripheral for speech recognition provided with a processor (55) and a memory (57) connected to the processor (55) and storing a list of VPN-addresses of at least one of a set of persons, personal functions, specific terminals and services as well as instructions to control said processor, the processor (55) being arranged to:

- communicate with a network apparatus (1, 7; 51) arranged to control a switch (49) in a telecommunication network;
- communicate with said switch (49);
- perform the following operations controlled by said instructions:
  - to receive a call from said switch (49), to establish a communication channel with said switch (49) and to receive a demand to be able to receive a speech instruction;
  - to receive from a first telecommunication apparatus said speech instruction associated with a VPN-number associated with either a desired person, personal function, second telecommunication apparatus or service desired to be called or noticed by said first telecommunication apparatus;
  - to translate said speech instruction into a VPN address associated with either a desired person, personal function, second telecommunication apparatus or service and send said VPN address to said network apparatus (1, 7; 51), the VPN-address having a predetermined format in accordance with a protocol used in the telecommunication network in which the intelligent peripheral is to be operated;
  - to transfer at least the VPN-address, as well as the identity and current location of the first telecommunication apparatus to said switch (49) in order to be transferred by said switch (49) to said network apparatus (1, 7; 51) as a standard IN request;
  - to release said communication channel with said switch (49).

2.   Intelligent peripheral according to claim 1, wherein said processor is arranged to notify said first telecommunication apparatus with a welcome message that the intelligent peripheral is ready and waiting for said speech instruction.

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3. Intelligent peripheral according to claim 1 or 2, wherein said VPN addresses include at least one of the following sets: fixed telephone addresses, mobile telephone addresses, e-mail addresses, facsimile addresses.

5   4. Intelligent peripheral according to claim 3, wherein said processor is arranged to recognize an additional spoken instruction indication in which set the VPN-address is stored.

    5. Telecommunication network comprising an intelligent peripheral according to
10 any of the preceding claims, a first switch (49) connected to said intelligent peripheral (43, 53), and a network apparatus (1, 7; 51) connected both to said first switch (49) and to said intelligent peripheral, said network apparatus (1, 7; 51) being arranged to control said first switch (49).

15   6. Telecommunication network comprising an intelligent peripheral according to any of the claims 1-4, a first switch (49) connected to said intelligent peripheral (43, 53), and a network apparatus (1, 7; 51) connected to said first switch (49), said network apparatus (1, 7; 51) being arranged to control said first switch (49).

20   7. Telecommunication network comprising an intelligent peripheral according to any of the claims 1-4, a first switch (49) connected to said intelligent peripheral (43, 53), and a network apparatus (1, 7; 51) connected to a second switch (49), said network apparatus (1, 7; 51) being arranged to control said second switch (49).

25   8. Telecommunication network according to any of the claims 5-7, wherein said network apparatus is arranged to control said intelligent peripheral.

    9. Telecommunication network according to any of the claims 5-8, arranged to support the following operations:
30   • by said intelligent peripheral (43; 53):
      • to receive a call from said first switch (49), establish a communication channel with said first switch (49) and to receive a demand to be able to receive a speech instruction;

- to receive from a first telecommunication apparatus said speech instruction associated VPN-number associated with either a desired person, personal function, second telecommunication apparatus or service desired to be called or noticed by said first telecommunication apparatus;

- to translate said speech instruction into a VPN address associated with either a desired person, personal function, second telecommunication apparatus or service and send said VPN address to said network apparatus (1, 7; 51), the VPN-address having a predetermined format in accordance with a protocol used in the telecommunication network in which the intelligent peripheral is to be operated;

- to transfer at least the VPN-address, as well as the identity and current location of the first telecommunication apparatus to said first switch (49);

- to release said communication channel with said switch (49);

- by said network apparatus (1, 7; 51), to receive from said first switch (49) a standard IN request based on said VPN-address to establish a current address of said desired person, personal function, specific terminal or service and to send it to said first switch (49) to establish said connection between said first and second telecommunication apparatuses.

10.   Telecommunication network according to any of the claims 5-9, arranged to support at least one of a UPT-service, a 3G-service, Freephone, Premium rate, Credit Call, Credit Card call, Televoting.

11.   Telecommunication network according to any of the claims 5-10, wherein the network apparatus (1, 7; 51) is arranged to translate said VPN-address into another VPN-address where a user of said VPN-address can be reached temporarily.

12.   Telecommunication network according to any of the claims 5-11, wherein the network apparatus (1, 7; 51) is arranged to provide at least one of the following fall back options if the intelligent peripheral (43; 53) fails to provide said VPN-address:

- requesting a user of said first telecommunication apparatus to provide said VPN-address;

- requesting a user of said first telecommunication apparatus to provide said spoken name again by either DTMF codes or by using a keyboard.

13. Telecommunication network according to any of the claims 5-12, wherein the network apparatus comprises a service capability server (7) arranged to control the first switch (49), and at least one application server (1) connected to said service capability server (7), the intelligent peripheral (43) being also connected to said service capability server (7) and said application server (1).

14. Telecommunication network according to any of the claims 5-12, wherein the network apparatus comprises a service control point (7) arranged to control the first switch (49), the intelligent peripheral (43) being also connected to said service control point (51).

15. Method to provide speech recognition by an intelligent peripheral provided with a processor (55) and a memory (57) connected to the processor (55) and storing a list of VPN-addresses of at least one of a set of persons, personal functions, specific terminals and services as well as instructions to control said processor, the processor (55) being arranged to:

- communicate with a network apparatus (1, 7; 51) arranged to control a switch (49) in a telecommunication network;
- communicate with said switch (49);

the method comprising the following operations controlled by said intelligent peripheral:

- to receive a call from said switch (49), to establish a communication channel with said switch (49) and to receive a demand to be able to receive a speech instruction;
- to receive from a first telecommunication apparatus said speech instruction associated with VPN-number associated with either a desired person, personal function, second telecommunication apparatus or service desired to be called or noticed by said first telecommunication apparatus;
- to translate said speech instruction into a VPN address associated with either a desired person, personal function, second telecommunication apparatus or service and send said VPN address to said network apparatus (1, 7; 51), the VPN-address

having a predetermined format in accordance with a protocol used in the telecommunication network in which the intelligent peripheral is to be operated;

- to transfer at least the VPN-address, as well as the identity and current location of the first telecommunication apparatus to said switch (49) in order to be transferred by said switch (49) to said network apparatus (1, 7; 51) as a standard IN request;

- to release said communication channel with said switch (49).

16.   Method to be performed by a telecommunication network according to any of the claims 5-14, including the following operations:

- by said intelligent peripheral (43; 53):

  - to receive a call from said first switch (49), establish a communication channel with said first switch (49) and to receive a demand to be able to receive a speech instruction;

  - to receive from a first telecommunication apparatus said speech instruction associated with VPN-number associated with either a desired person, personal function, second telecommunication apparatus or service desired to be called or noticed by said first telecommunication apparatus;

  - to translate said speech instruction into a VPN address associated with either a desired person, personal function, second telecommunication apparatus or service and send said VPN address to said network apparatus (1, 7; 51), the VPN-address having a predetermined format in accordance with a protocol used in the telecommunication network in which the intelligent peripheral is to be operated;

  - to transfer at least the VPN-address, as well as the identity and current location of the first telecommunication apparatus to said first switch (49);

  - to release said communication channel with said switch (49);

- by said network apparatus (1, 7; 51), to receive from said first switch (49) a standard IN request based on said VPN-address to establish a current address of said desired person, personal function, second telecommunication apparatus or service and to send it to said first switch (49) to establish said connection between said first telecommunication apparatus and said desired person, personal function, second telecommunication apparatus or service.

17.   Computer program product to be loaded by an intelligent peripheral and arranged
to provide said intelligent peripheral with the capacity to perform the method of claim
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5   18.   Data carrier provided with a computer program product according to claim 17.